

CLAIMS

1. A semiconductor device comprising:

a first lead having an inner portion;

5 a semiconductor chip mounted on the inner portion of the first lead;

a second lead having an inner portion electrically connected to the semiconductor chip; and

a resin package for sealing the semiconductor chip together with the inner portions of the first and second leads;

10 wherein at least the semiconductor chip is coated with a coating film formed of amorphous fluoro-resin.

2. The semiconductor device according to claim 1, wherein the semiconductor chip is electrically connected to the inner portion of the second lead via a wire, the coating film also covering the wire and the inner portions of the first and second leads.

20 3. The semiconductor device according to claim 1, wherein the amorphous fluoro-resin is PTFE.

4. The semiconductor device according to claim 1, wherein the coating film has a thickness of 5-50 $\mu$ m.

25 5. The semiconductor device according to claim 1, wherein the semiconductor chip is an LED chip.

6. The semiconductor device according to claim 1, wherein the resin package is formed of a transparent resin.

7. A method of making a semiconductor device comprising the steps of:

mounting a semiconductor chip on an inner portion of a first lead;

electrically connecting the semiconductor chip to an inner portion of a second lead;

coating at least the semiconductor chip with a coating film formed of amorphous fluororesin; and

molding a resin package for sealing the semiconductor chip together with the inner portions of the first and second leads.

8. The method according to claim 7, wherein the semiconductor chip is electrically connected to the inner portion of the second lead via a wire, the coating step is performed for causing the coating film to also cover the wire and the inner portions of the first and second leads.

9. The method according to claim 7, wherein the coating step is performed by using PTFE as the amorphous fluororesin.

10. The method according to claim 7, wherein the coating step is performed until the coating film grows to a thickness of 5-50 $\mu$ m.

11. The method according to claim 7, wherein the coating step is performed by applying a amorphous fluororesin mixed with a volatile solvent and drying the same.

5 12. The method according to claim 7, wherein the molding step is performed by using a transparent resin.

10043898-011102